

Range-wide Status Assessment of *Cirsium longistylum* (long-styled thistle)

Prepared for:

Burnett Land, LLC

By:

Scott Mincemoyer

Montana Natural Heritage Program
Natural Resource Information System
Montana State Library

December 2004



Range-wide Status Assessment of *Cirsium longistylum* (long-styled thistle)

Prepared for:

Burnett Land, LLC

Contract Number:

20040504

By:

Scott Mincemoyer



© 2004 Montana Natural Heritage Program

P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • 406-444-5354

This document should be cited as follows:

Mincemoyer, S. 2004. Range-wide Status Assessment of *Cirsium longistylum* (long-styled thistle). Report to Burnett Land, LLC. Montana Natural Heritage Program, Helena, MT. 22 pp. + appendices.

EXECUTIVE SUMMARY

Cirsium longistylum Moore & Frankton (long-styled thistle) is a state endemic thistle restricted to areas of central Montana in and around the Little Belts, Big Belts and Castle mountains, generally on sedimentary parent materials. First described as a distinct species in 1963, its overall distribution and abundance remained poorly documented for a couple decades afterwards. It is currently known from a six county area. The majority of the populations occur on National Forest lands managed by the Helena and Lewis and Clark National Forests, though a few populations occur partially or wholly on private lands.

Field surveys were initiated in 2004 to update occurrence and population data for the species. These surveys discovered several new populations, extended the boundaries of several others, failed to relocate a few occurrences and provided updated and more precise population estimates for most of the known occurrences. Additional data and field observations were collected that enabled us to clarify potential threats such as those posed by

invasive weeds and an introduced bio-control *Rhinocyllus conicus*.

Population estimates of nearly 30,000 plants, including seven high quality populations, scattered over four mountain ranges are promising for the long-term viability of the species. Long- and short-term population trends are difficult to gauge due to the lack of good survey data over many years. However, available data and observations provide some evidence that population levels have at least remained fairly stable over the past decade, with significant yearly fluctuations possible. Threats posed by invasive weeds and the introduced bio-control provide reason for concern and population monitoring should continue in the future. As a result of this assessment, the Montana Natural Heritage Program ranking of the species will change from the current G2/S2 to G3/S3 (see Appendix A: Global/State Rank Definitions).

ACKNOWLEDGEMENTS

This assessment was made possible by funds from Burnett Land, LLC and the 6666 Ranch. Drake Barton conducted much of the survey work in 2004 and also in 2001 on the Helena National Forest and provided valuable background information. Thanks to Cathy Seibert at Montana State University for providing specimen information and allowing examination of herbarium specimens. Thanks to Kathy Lloyd for reviewing the document and

providing many valuable insights. Coburn Currier attended to the final layout and production. Special thanks to Bryan Douglass and Bruce Goldberg for providing logistical support. Many other individuals provided useful information and help. They include Steve Shelly, Steve Cooper, Wayne Phillips and the entire staff at the Montana Natural Heritage Program.

TABLE OF CONTENTS

Introduction	1
Species Information	2
Classification	2
Present Legal or Other Formal Status	2
Description	2
Geographic Distribution	4
Habitats	13
Land Owership	14
Potential Threats to Known Populations	15
Assessment and Recommendations	18
General Assessment of Trends and Status	18
Status Recommendation	20
Literature Cited	21

Appendix A: Global/State Rank Definitions

Appendix B: Element Occurrence Rank Definitions

Appendix C: Element Occurrence Maps for *Cirsium longistylum*

LIST OF FIGURES

Figure 1. <i>Cirsium longistylum</i> flower head	3
Figure 2. Putative hybrid between <i>C. longistylum</i> and <i>C. hookerianum</i> in the Dry Range	3
Figure 3. <i>Cirsium hookerianum</i> flower head	3
Figure 4. Occurrences of <i>Cirsium longistylum</i> (Extant and Historical EO's)	5
Figure 5. <i>Cirsium longistylum</i> habitat in the Dry Range	14
Figure 6. <i>Cirsium longistylum</i> habitat and flowering plants near Spur Park after fire	14
Figure 7. <i>Rhinocyllus conicus</i> weevils on <i>C. longistylum</i> in the Little Belt Mountains	15
Figure 8-9. Grazing impacts on <i>Cirsium longistylum</i>	17
Figure 10. Permanent monitoring plot (15' radius) near Kings Hill, Little Belt Mountains	18
Figure 11. Permanent monitoring plot (37' radius) near Russian Creek, Little Belt Mountains	18
Figure 12. Permanent monitoring plot (15' radius) near Neihart, Little Belt Mountains	19

LIST OF TABLES

Table 1. Element Occurrence Records for <i>Cirsium longistylum</i>	8
Table 2. Ranking factors and assigned scores for the <i>C. longistylum</i> assessment	19